

# UNIQUE IDENTIFICATION (UID)



## **JASCG Brief**

**September 2004**



# DoD Vision for Item Marking

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To implement a policy establishing a strategic imperative for uniquely identifying tangible items relying to the maximum extent practical on international standards and commercial item markings and while not imposing unique government data requirements.

Uniquely identified (UID) tangible items will facilitate item tracking in DoD business systems and provide reliable and accurate data for management, financial, accountability and asset management purposes.



# UID: Why Do It?

- ✓ ***To achieve a lower cost of item management as a result of being able to consistently capture the value of items purchased, control items during their use, and combat counterfeiting of parts***
- ✓ ***To improve item availability and reduce frustrated freight as a result of an increased availability of data, more efficient item management, and increased asset visibility***
- ✓ ***Capitalize on evolving best commercial practices in asset visibility/traceability***
- ✓ ***To improve long term inventory management and strategic purchasing as a result of more accurate and available data***
- ✓ ***To achieve clean audit opinions on the Property, Plant, and Equipment and Operating Materials and Supplies Portions of DoD Financial Statements***



# UID OUTCOMES: Why Do It?

## **Acquisition**

- Increase business intelligence
- Enable paperless Government Furnished Property Management
- Leverage commercial technologies and practices
- Increase supply chain visibility
- Create a common language of business

## **Logistics**

- Increase systems/equipment operational availability
- Lower costs of managing assets
- Improve end to end asset visibility
- Reliability and maintainability info on each item through life
- Improve supply chain efficiency

## **Accounting and Finance**

- Enable clean audit opinion
- Reduce late interest penalties

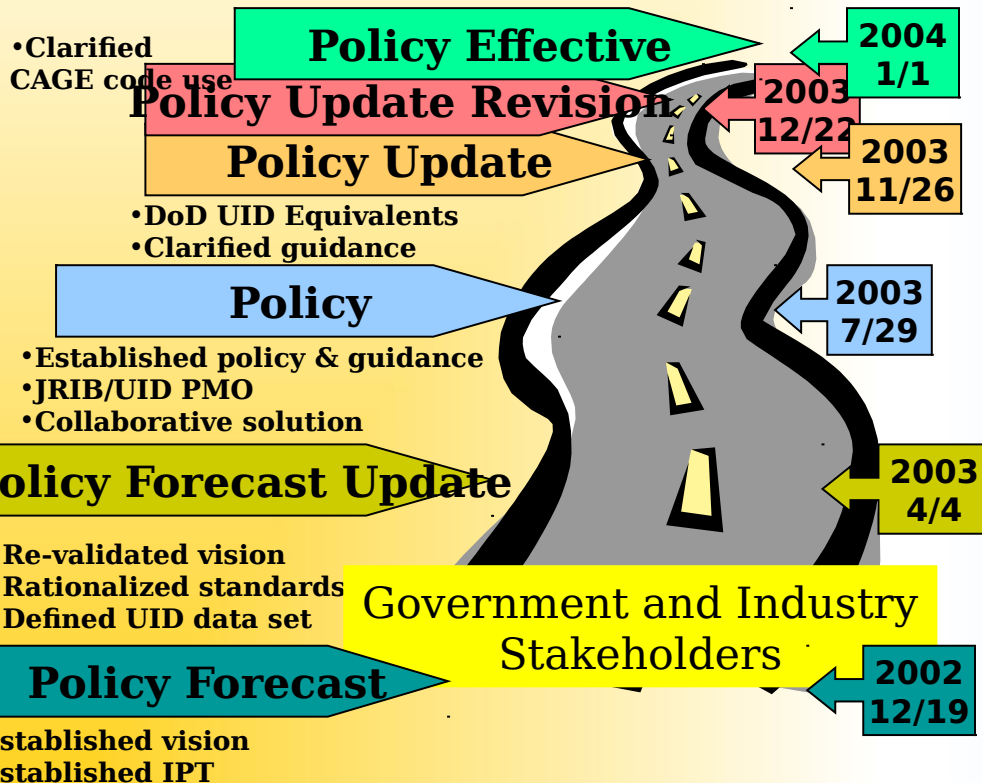
## **Joint Forces**

- Increase in-transit visibility
- Decrease frustrated freight
- Enable coalition support
- Improve data quality and interoperability



# What has been our plan

## UID Policy



## Contracting

- ✓ July 29, 2003 - DoD Policy Memorandum Issued
- ✓ August 6, 2003 - DFARS Case Opened
- ✓ October 10, 2003 - DFARS Interim Rule Issued
- ✓ November 10, 2003 - Public Comments Due
- ✓ December 30, 2003 - 2<sup>nd</sup> Interim Rule Issued
- ✓ **January 1, 2004** - Effective Date
- ✓ March 1, 2004 - Public Comments Due
- ✓ The Interim Rule Adds **Mandatory** Requirement for -
- ✓

• Contractors to provide **unique identification** for items delivered to DoD, through the use of item identification marking.

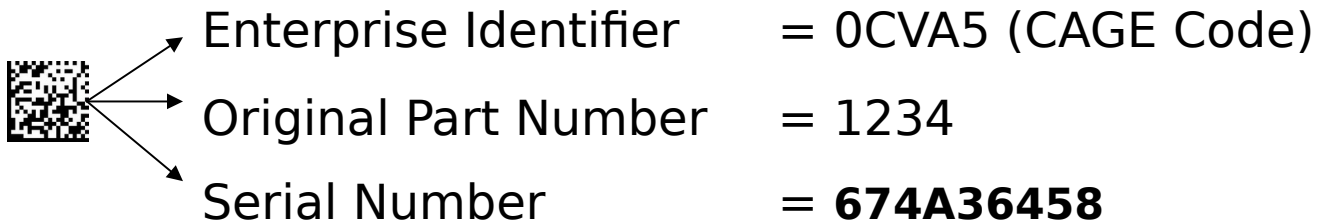
• Contracts to provide for identification of the Government's **acquisition cost** of all items built or acquired by the contractor and subsequently delivered to DoD under the contract.



# UID: How is it Constructed?

The UID shall be derived from its discrete component data elements – the UID is not required to be marked on the item as a separate data element

From the Data Matrix:



The UID can be derived using the IAC for CAGE, which is "D".

UID Construct 1	UID Construct 2
<i>If the Serial Number is Unique within the Enterprise Identifier</i>	<i>If the Serial Number is Not Unique within the Enterprise Identifier but is Unique within the Part Number</i>
<b>D0CVA5674A36458</b>	<b>D0CVA51234674A36458</b>



# UID Policy Overview

- ◆ Final UID policy released on July 29<sup>th</sup> established UID as a mandatory DoD requirement on all solicitations issued on or after January 1, 2004.
  - Policy Updates issued November 26, 2003, December 22, 2003 and September 3, 2004.
- ◆ UID is required for all property items delivered to the Government if:
  - Acquisition cost is more than \$5,000
  - Item is serially managed, mission essential, or controlled inventory piece of equipment or reparable; or a consumable item or material requiring permanent identification
  - Item is a component of a delivered item and PM requires UID
  - UID or DoD-recognized equivalent is available
- ◆ Wide Area Workflow (WAWF) will be modified to capture UID and WAWF will be a mandatory payment requirement no later than January 1, 2005



# UID: Database Data Transmission

The contractor is required to transmit, upon shipment notification, UID database data in addition to the data in the Data Matrix symbol and in addition to any data previously required during shipment notification

End Item Database Data (15) includes:

- ◆ **UID (Concatenated)**
- ◆ Descriptive Data
  - UID Data Elements (3)
  - Issuing Agency Code
  - UID Type
  - Item Description
  - Unit of measure
- ◆ Acquisition Data
  - Contractor
  - Contract Number
  - CLIN/SLIN/ELIN
  - Price
  - Acceptance Code (identifies acceptor)
  - Acceptance Date
  - Ship to code

## Embedded Items of End Items (10)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
  - UID Data Elements (3)
  - Issuing Agency Code
  - UID Type
  - Item Description
  - Unit of measure
- ◆ **Parent UID as of delivery date**
- ◆ GFP flag





# UID Policy Implementation

## Timeline

### Policy

- ◆ UID Required for all New Solicitations - 01 January 2004
- ◆ RFID policy (ADUSD Supply Chain Integration) - 02 October 2003
  - Active RFID Use - Continue Current Use
  - Policy Kickoff IPT - October 2003
  - Final RFID Policy - July 2004
  - Passive RFID Use on Lowest Possible Piece Part/Case/Pallet - January 2005
- ◆ Final UID DFAR Case - September 2004
- ◆ Legacy UID Policy - September 2004
- ◆ UID Implementation for Contracts with Government Furnished Property - January 2005
- ◆ UID Required for all Depot Manufactured Items - January 2005

### ISO/IEC 15434 Change Request

- ◆ US TAG Proposal Approved - May 2004
- ◆ Obtained support from Air Transport Association (ATA) - June 2004
- ◆ ATA/UID Guidance - Sept 2004
- ◆ ISO/IEC 15434 amendment issued - June 2005



# AT&L Goals and Objectives



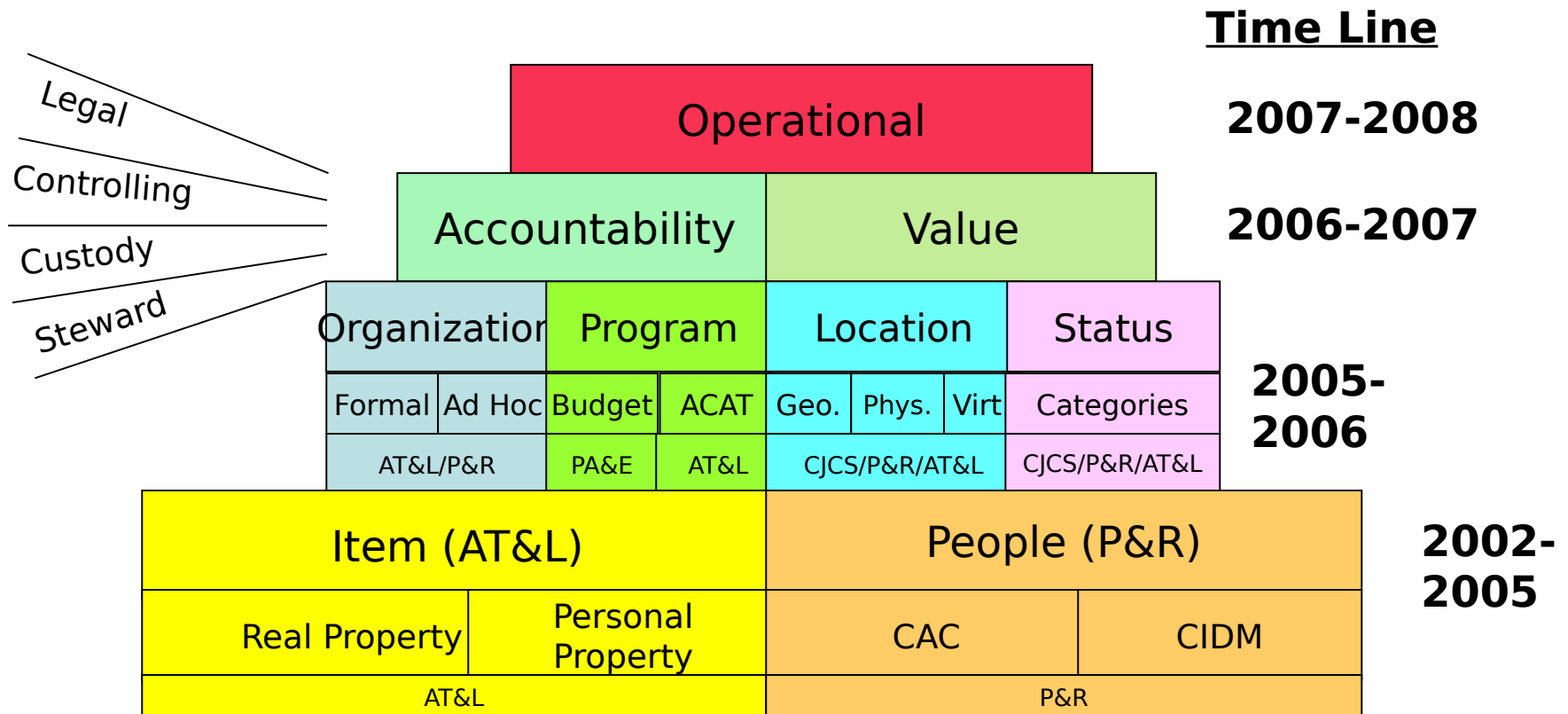
# Objectives and Goals

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- ◆ Develop a master plan and timeline integrating Real Property, UID of Tangible Items, and Property, Plant and Equipment
- ◆ Integrate the various UID efforts working with the Joint Staff, Personnel and Readiness, CIO and NII, Comptroller and Logistics and Acquisition
- ◆ Develop international support for the DoD UID solution
- ◆ Develop a legacy UID policy and integrate the maintenance objectives
- ◆ Integrate other stakeholders from OSD in UID



# Data Roadmap



CAC - Common Access Card  
 CIDM - Collaborative IDentity Management



# UID/Real Property/PP&E Integrated Plan

- ◆ Phase I - Initial UID Capability (target completion September, 2004)
  - Remaining Activity
  - Develop child data element
  - Develop access rules for registry, roles and responsibilities
- ◆ Phase II - Enhanced Item Intelligence (Sept. 2004 - Sept. 2005)
  - Item Description Aliasing (allow infinite aliases: catalog, NSN, description, etc.)
  - Status, with Effective Date (Fall, 2004)
  - Type of Mark (ability to add information into the database, even if 2D Data Matrix is not marked on the item)
  - Current Part Number
  - Child UID



# UID/Real Property/PP&E Integrated Plan

- ◆ Phase II (cont'd)
  - Reengineer:
    - Receipt and Acceptance (internal and external)
    - Next Level of Data (Organization, Program, Location, Status)
    - Cataloging
    - Government Furnished Property On-Line System
    - Finalizing Real Property Definitions and CONOPS
    - Consider Feasibility Demonstration for Maintenance Data Integration with Registry
- ◆ Phase III (2005 – 2006)
  - Operationalizing Organization, Program, Location, Status
  - Reengineer Accountability and Value
- ◆ Phase IV (2006 – 2007)
  - Operationalize Accountability and Value



# Legacy Policy



# Legacy Policy Migration Strategy

## Use of Virtual UID

Critical Mass - 2007

UID Central Data Registry

Notional Registration Rate

*Deployed/Stored  
Serially Managed  
Items*

**Assign Virtual UID**

- End Items
- Embedded Items
- Spares
- GFP

No Data Matrix

2005

- Near Term
- Mid Term
- Long Term

## Parts Physically Marked

*Newly Produced Serially  
& Non-Serially Managed  
Items*

**Modify On-Going  
Contracts**

- Delivery Order
- Options

Data Matrix UID

- Data Plates
- New Labels
- Direct Mark

2007

*Rebuilt/Repaired Serially  
& Non-Serially Managed  
Items*

**Depot  
Manufacturing  
&  
Maintenance**

Data Matrix UID

- Data Plates
- New Labels
- Direct Mark

2010





# Legacy Policy - “Definition of Completeness”

- ◆ A UID program should have a -
  - Process for marking instructions (process, location, method)
  - Orders or business process approach for organic operations and contractual language to support every (attrition-based) opportunity to mark sub-assemblies, components and parts not yet marked
  - Where applicable plan to utilize existing (legacy) serial number tracking programs to provide virtual UID within parent assembly
  - AIS would have UID capability, and rudimentary sorts/relational linkage



# 2004 Legacy Policy Requirements

- ◆ Program plans need to be complete by 2005 and must -
  - Identify scope of embedded assets
  - Address the trigger events to be used by the program
  - Forecast target level of completion by fiscal year
  - Identify expected technology for marking and reading
- ◆ Significant percentage of sub-assemblies and end items with existing data plates updated by an interim target date
- ◆ Update plan to address business processes and data integration by an interim target date
- ◆ Services and components must develop plans and address data capture strategy by specific dates
- ◆ Programs will have different levels of completion by 2010
- ◆ Identify mission-essential items first



# Critical Issues



# Critical Issues

- ◆ UID Registry Concept Exploration
- ◆ Data Capture
  - Develop a strategy to build support for data capture requirements in relation to other initiatives
- ◆ Enabling an Integrated Digital Environment with Industry
  - Regarding Government Furnished Property Management
  - Regarding Legacy Data
- ◆ UID End to End Process
  - Data and Process View
  - Systems View
- ◆ Coordination of Military and Intra-DoD Emerging UID Policies
- ◆ Development of Program Strategies for Deployment to Legacy
- ◆ Outreach and Communication



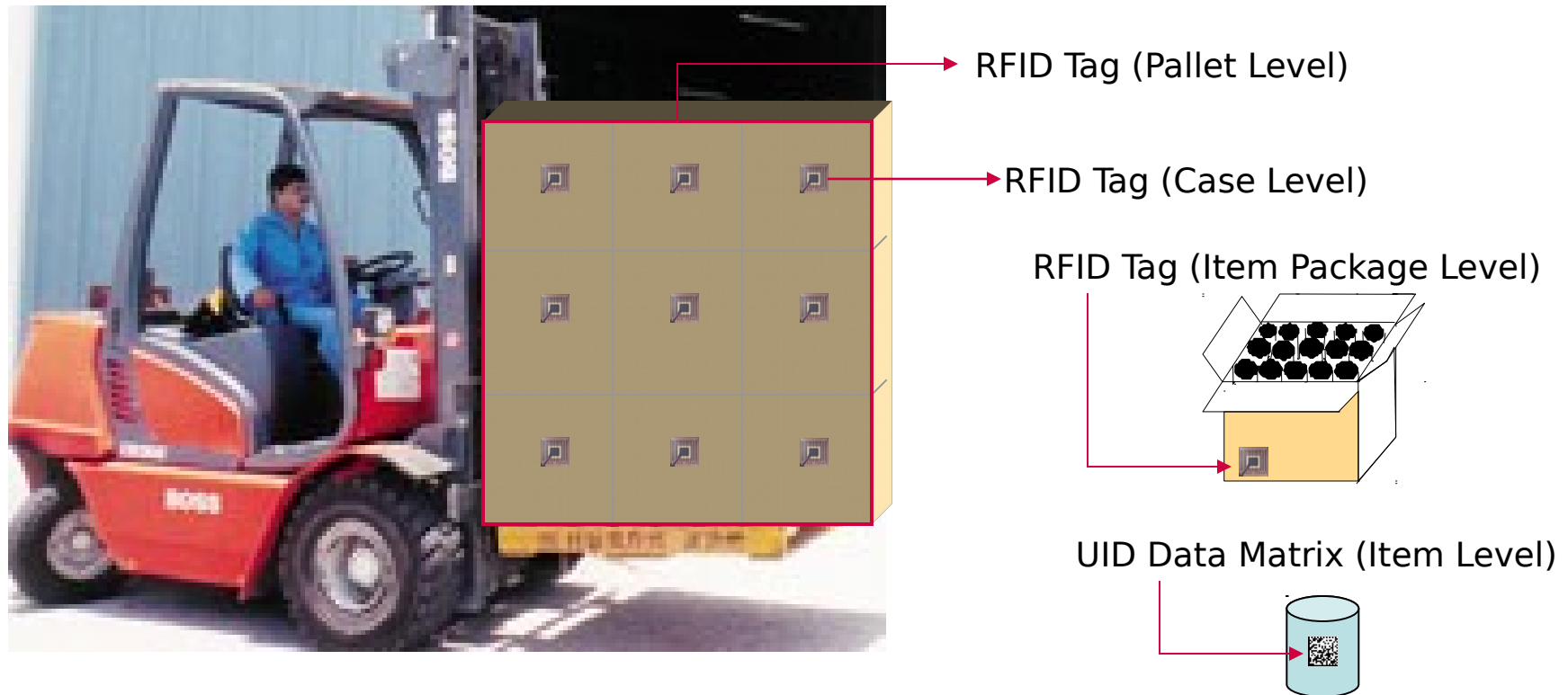
# Hot Re-engineering Projects

- ◆ Develop an end-to-end UID process model
- ◆ Re-engineer receipt, acceptance, and payment across DoD integrating property, logistics, contracts, financial and configuration management for UID
  - Learn from CH-47
  - Integrate with property accountability
  - Capture parent/child information
  - Integrate with Government Industry Data Exchange Process and Flight Safety Critical Aircraft Parts
  - Ensure connection to transportation and asset visibility capabilities
- ◆ Capture catalog and item designations relying on commercial capability
- ◆ Integrate with Standard Procurement System
- ◆ Develop ERP intersection criteria
  - WAWF and UID
  - Build UID into BEA assessment tool



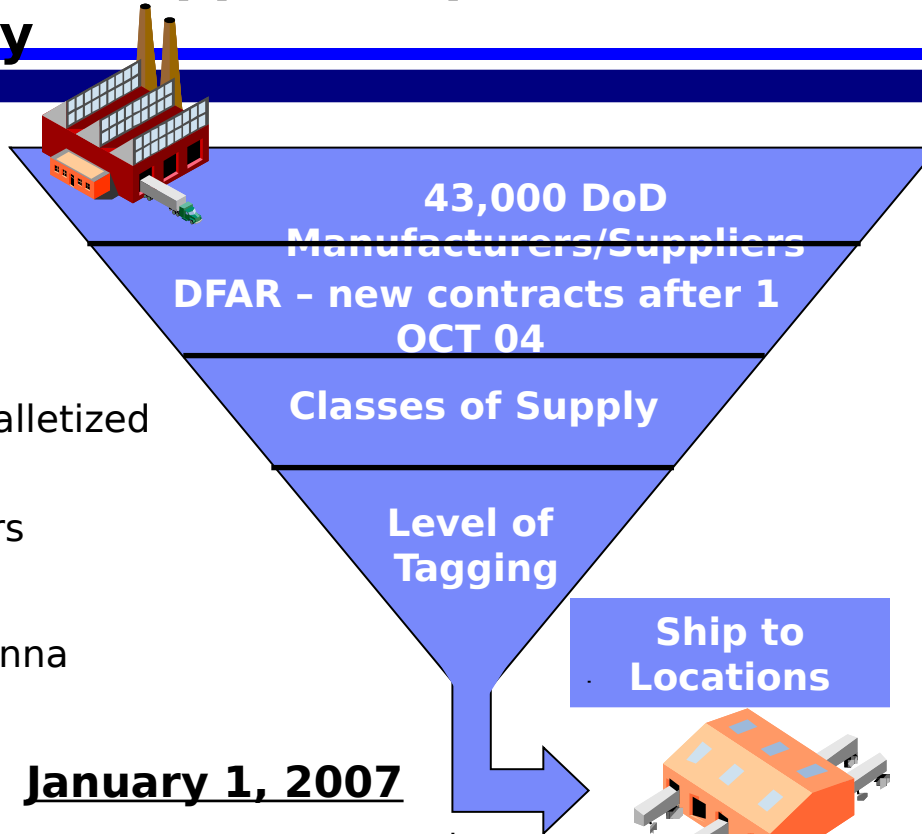
# UID-RFID Policy Relationship

**According to current DoD Policy, RFID tags that carry data are required to be attached to packages at multiple levels, including item packages, cases, and pallets. Unique Identifiers are required to be attached or directly marked on items using a data matrix to carry the UID data elements.**





# The DoD's Supplier Implementation Strategy



**January 1, 2005**

**Classes of Supply:**

- II, VI, IX, I (PORs/MREs)

**Level of Tagging:**

- Shipping Containers, Palletized Unit

Loads, Exterior Containers

**Ship to locations:**

- San Joaquin, Susquehanna

**January 1, 2006**

**Classes of Supply:**

- Begin All Classes

**Level of Tagging:**

- Shipping Containers, Palletized Unit Loads, Exterior Containers

**Ship to locations:**

- Strategic CONUS DLA Depots, TRANSCOM Facilities & Service Maintenance Facilities

**January 1, 2007**

**Classes of Supply:**

- All Classes

**Level of Tagging:**

- Shipping Containers, Palletized Unit Loads, Exterior Containers, UID Item Unit Pack

**Ship to locations:**

- All Locations



# UID-RFID Database Data Relationship

## End Item Database Data (15)

- ◆ UID (Concatenated)
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## Embedded Items of End Items (10)

- ◆ UID (Concatenated)
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  - UID Data Elements (5)
  - Item Description
  - Unit of measure
- ◆ Parent UID as of delivery date
- ◆ GFP flag

## RFID Data at the Pallet Level

- ◆ Pallet EPC
- ◆ Shipping Data

## RFID Data at the Case Level

- ◆ Pallet EPC
- ◆ Case EPC

## RFID Data at the Item Package Level

- ◆ Case EPC
- ◆ Item Package EPC





## Next Steps



# Build on Emerging UID Strategies

- ◆ **Corporate and Plant-wide single processes (Engine manufacturers initially)**
- ◆ Corporate top-down strategies
- ◆ Pilot programs (JDAM; CH-47)
- ◆ Program level (Blackhawk; V-22)
- ◆ Small business (Central labeling capability; marking by prime contractor or government)
- ◆ Engineering drawings best business practices
- ◆ Standard flow-down clause to suppliers
- ◆ Legacy item data integration



# Roadmaps Under Construction

## DoD

- Distribution Centers & Depots
- Inventory Control Points
- Components at Large
- DCMA
  - GFP
  - QA
  - Receipt & Acceptance
    - Address mid-909
- Program Managers
- Item Managers

Organizations

Roles and Resp.

Industry (Small/Medium/Large Companies)

DoD AIS Roadmaps and UID Conops



# Stakeholder Guidance

- ◆ PEO/PM Awareness, Roadmap, and Implementation Guidance
- ◆ Quality Assurance Plan
- ◆ Part Marking Guidance
- ◆ Contracting/Finance
- ◆ Process Capability (Hardware/Software)
- ◆ Engineering Guidance
- ◆ Data Management
- ◆ Production Readiness



# Contact Information

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A variety of UID background materials and previous UID policy memos can be found at

[www.uniqueid.org](http://www.uniqueid.org)